

## CLAIMS

I claim:

- 1 1. A system for protecting a destination block in a disk  
2 array from being overwritten, the system comprising:  
3 a data mover;  
4 a controller coupled to the data mover, the controller  
5 operable to detect an application write request to the  
6 destination block and to stall the application write  
7 request while a data mover operation initiated by the data  
8 mover is terminated.
- 1 2. The system of claim 1 wherein the data mover is  
2 disposed in the disk array.
- 1 3. The system of claim 1 wherein the controller is  
2 disposed in the disk array.
- 1 4. The system of claim 1 wherein the controller is  
2 operable to complete the application write request upon a  
3 termination of the data mover operation.

1 5. The system of claim 1 wherein the data mover provides  
2 an extent list including the destination block to the  
3 controller.

1 6. The system of claim 1 wherein the controller is  
2 operable to send a request to the data mover to initiate  
3 the data mover operation termination.

1 7. A system for protecting a destination block in a disk  
2 array coupled to a storage area network from being  
3 overwritten by a server write request to the destination  
4 block, the system comprising:

5 a data mover;

6 a controller coupled to the data mover, the controller  
7 operable to detect the server write request and to stall  
8 the server write request while a data mover operation is  
9 terminated.

1 8. A block protection system comprising:  
2 a storage device;  
3 a data mover;  
4 a controller coupled to the data mover, the controller  
5 operable to detect a write request to a destination block  
6 of a storage device and to stall the write request while a  
7 data mover operation is terminated.

1 9. A method for ensuring the integrity of a storage  
2 device comprising:  
3 (a) deriving an extent list describing destination  
4 blocks on the storage device to which an object is being  
5 moved by a third party copy operation;  
6 (b) transmitting the extent list to a disk array;  
7 (c) verifying the extent list and returning to step  
8 (a) if the extent list is not valid, else;  
9 (d) starting the third party copy operation;  
10 (e) monitoring for a write request from an application  
11 server;  
12 (f) stalling the write request if a write request is  
13 received and requesting a termination of the third party  
14 copy operation; and  
15 (g) completing the write request upon termination of  
16 the third party copy operation.

1 10. The method of claim 9 wherein steps (a), (b) and (c)  
2 are executed by an application program.

1 11. The method of claim 9 further comprising:  
2 releasing the extent list at the disk array after the  
3 execution of step (g);  
4 re-verifying the extent list; and  
5 repeating steps (a) through (g) if the extent list is  
6 not valid.

1 12. A computer readable medium containing computer  
2 readable instructions, the medium comprising:  
3 a code segment for (a) deriving an extent list  
4 describing destination blocks on the storage device to  
5 which an object is being moved by a third party copy  
6 operation;  
7 a code segment for (b) transmitting the extent list to  
8 a disk array;  
9 a code segment for (c) verifying the extent list and  
10 returning to step (a) if the extent list is not valid,  
11 else;  
12 a code segment for (d) starting the third party copy  
13 operation;  
14 a code segment for (e) monitoring for a write request  
15 from an application server;  
16 a code segment for (f) stalling the write request if a  
17 write request is received and requesting a termination of  
18 the third party copy operation; and  
19 a code segment for (g) completing the write request  
20 upon termination of the third party copy operation.

1 13. The computer readable medium of claim 12 further  
2 comprising:  
3 a code segment for releasing the extent list at the  
4 disk array after the write request is completed upon  
5 termination of the third party copy operation;  
6 a code segment for repeating steps (a) through (g) if  
7 a re-verified extent list is not valid.